

Carter's 'Shooting in Early Days.'—In a neatly printed little pamphlet issued privately by Mr. Charles Morland Carter he describes his experiences as a gunner beginning about the year 1864. His early reminiscences deal with New England and are full of association with William Brewster and Ruthven Deane, two of his boyhood acquaintances. Later come his experiences in Iowa, Kansas, Oklahoma and other portions of the middle West.

Besides the interest that attaches to a personal narrative of this kind there is much of value to the ornithologist in the accounts of the Quail and Woodcock shooting of those times and the several mentions of Passenger Pigeons, especially of a trap shooting contest at Concord Junction in 1872, in which Deane and Brewster participated and in which the birds were 200 Passenger Pigeons purchased for the occasion.

If other sportsmen whose experiences date back to the sixties, would follow Mr. Carter's example we should have preserved many valuable records of the early abundance of game birds which otherwise will be lost forever.—W. S.

Recent Publications on Conservation and Education.—The April 1920, number of the 'Nature Study Review'¹ is a bird-study number containing many short articles on various species. The most noteworthy contribution is by Anna B. Comstock: 'Suggestions for a Graded Course in Bird Study' which will be welcome to many teachers. The suggestion is made of collecting one or more old nests and mounting them in cardboard boxes beside which may be mounted a standard outline drawing of the species colored by the student. The use of colored drawings instead of mounted birds or skins will soon become a necessity as the supply of old birds in museums, etc., becomes exhausted.

Mr. John H. Wallace's 'Alabama Bird-day Book'² is as usual an admirable assistant to teachers engaged in conducting Bird-Day exercises. This year's issue contains a special article by E. H. Forbush on the migration of North American birds into the countries to the south of us and the importance of securing co-operation there for their protection as has been accomplished with Canada on the north.

Miss Althea R. Sherman has an interesting 'Historical Sketch of the Park Region about McGregor, Iowa, and Prairie Du Chien, Wisconsin'³ in 'Iowa Conservation' Vol. III. Nos. 1 and 2, in which she advocates the establishment of a park or reservation on the Iowa side of the Mississippi, opposite the one secured by Senator Robt. Glenn at the mouth of the Wisconsin River.

¹ Shooting in the Early Days, from 1863 to 1919. By Charles Morland Carter, St. Joseph, Missouri. December, 1919. Printed for Private Distribution. Grogg Printing Co., pp. 1-38.

² Nature Study Review. Ithaca, N. Y.

³ Alabama Bird-Day Book, Dept. of Game and Fish. Montgomery, Alabama.

³ Iowa Conservation, Vol. III.

'Fins, Feathers and Fur'⁴ for March, 1920 contains an appeal from Harry J. LaDue for the extermination of "vermin" by the sportsmen. Everything which may destroy game is today "vermin," but the destruction of all this wild life may so upset the balance of nature that the game will go too before we realize the complicated interrelation between wild creatures with which we are interfering. Such work should be done only after most careful consideration by those who understand the problem. The statement that "the Crow is now everywhere regarded as one of the great menaces to song and game birds" is hardly supported by the reports. It is destructive locally to certain crops and should be dealt with accordingly, but in other places and other seasons it is unquestionably beneficial. The hue and cry against the Crow which has lately spread over the country seems to have been inspired by certain manufacturers of guns and ammunition more than by anyone else. 'Bluebird'⁵ in its March issue takes up the cudgels for the Crow just as earnestly as the previous journal denounces him.

'California Fish and Game'⁶ tells of the arrest in that state of violators of the Migratory Bird Treaty all of whom were fined substantial amounts. There is also an account of the efforts to rid San Diego of the English Sparrow which promises to be successful as the number now remaining is estimated not to be over 100. The Illinois Audubon Society has published another of its attractive 'Bulletins'⁷ for the spring of 1920, which contains an admirable commentary on the State game laws, and many notes and reports on bird study.

A Fascicle of Papers on British Economic Ornithology.—All of the articles here reviewed are by Dr. Walter E. Collinge who is giving more attention to economic ornithology than any other of his countrymen. Two of the papers were published in the new 'Journal of the Wild Bird Investigation Society,' Dr. Collinge, editor, which is devoted to the preservation and to all other interests of British birds. One¹ of these is general in nature, calling attention to the close relationship of birds to the welfare of agriculture, the greater attention paid to this matter in other countries and the desirability of doing more work on the subject in Great Britain. The Rook and the Pheasant are discussed in some detail as examples, respectively, of destructive and beneficial species, and a tabulation is given of the principal food items of 22 species of British birds which shows "that the sum total of their activities is distinctly in favor of the farmer and fruit-grower." The paper concludes by pointing out the great importance at the present time of aiding British agriculture

⁴ Minnesota Game and Fish Dept., St. Paul, Minn.

⁵ Bluebird, 1010 Euclid Ave., Cleveland, Ohio.

⁶ California Game and Fish Commission, Sacramento, Cal.

⁷ Illinois Audubon Society, 1649 Otis Building, Chicago, Ill.

¹ Wild Birds: Their Relation to the Farm and the Farmer. Op. cit. Vol. 1, No. 2, March, 1920.

in every way, and in making a special plea for investigations in economic ornithology upon which, alone, rational treatment of birds can be based.

Two of Dr. Collinge's articles relate to fish-eating birds, in one of which² it is pointed out that past statements on the matter have not been based on careful investigation, and preliminary results are announced of a study begun under the auspices of the Carnegie Trust for the Universities of Scotland. More than 3000 specimens representing 14 species have been examined, and the striking results are that "fish does not constitute the bulk of their food or anything like the major portion of it," that only two species, the Cormorant and the Shag, are purely fish-eaters, that only one other, the Common Tern preys chiefly on fish, and that 11 of 14 species consume fish to the extent of less than 20 percent of their food. The diet of the Black-headed Gull is treated in some detail, with a conclusion favorable to the bird.

The Kingfisher is the subject of the second paper³ on fish-eating birds; the bird's habits are sketched and a report is presented on the examination of stomach contents and food remains taken from nesting burrows. Averaging results from both sources, Dr. Collinge shows that 61.5 per cent of the Kingfisher's food consists of fish, 12.52 of which is trout. Stated in economic terms, 13 per cent of the birds food is taken at man's expense, 16 per cent contributes to human welfare and 71 per cent is neutral. An especially interesting feature of the analyses is the close agreement between the proportions of the principal items of food in the material taken from stomachs and in the disgorged indigestibles from the nest. A table of percentages exhibiting this relationship follows:

	From stomachs	From nests
Fish.....	63.5	59.5
Mollusks.....	4.0	4.0
Tadpoles.....	3.5	5.5
Injurious Insects.....	16.5	15.5
Neutral Insects.....	6.0	4.5
Crustaceans.....	3.5	6.5
Worms.....	1.5	1.5

Thus it is quite evident that digestion, (at least so far as it is carried by pellet-disgorging species) does not materially alter the relative volumes of food items. The reviewer believes that this condition extends to excrement also, at least in the case of nestlings, and elsewhere⁴ he has urged study of this evidence as to food-habits. The particular importance of Dr. Collinge's findings lies in the validity they give to analyses of materials which can be collected and studied without destruction of bird life.

² Sea-birds: Their Relation to the Fisheries and Agriculture. *Nature*, April 8, 1920, reprint, 7 pp.

³ The Kingfisher—Is It Injurious? *Illustrated Sporting and Dramatic News*, March 6, 1920, reprint, 1 galley.

⁴ *Bul. 32, U. S. Biological Survey, 1908, pp. 23-24.*

Dr. Collinge made good application of this method in his report⁵ on the Barn Owl, founded on the contents of 12 stomachs and more than 300 pellets. The investigation like all others relating to this species is emphatically in the bird's favor.

A study of 'The Food of the Nightjar (*Caprimulgus europaeus* Linnæus)⁶ is prefaced by a statement that this species had been greatly diminished in numbers by persecution because of its being considered a hawk and on account of general prejudice and superstition due to its nocturnal, hence little-known, habits. This is unfortunate as the species is almost exclusively beneficial. The case parallels that of the American Nighthawk and Dr. Collinge's conclusion like that of bird-lovers in this country, is that these birds should receive the maximum of protection.—W. L. M.

The Ornithological Journals

Bird Lore. XXII, No. 2. March-April, 1920.

A Bird Watcher in France. By Dr. Herbert R. Mills.

Field Sparrows. By F. N. Whitman.—Some excellent photographic illustrations of the nest and young

A Surprised Crow. By Verdi Burtch.—An amusing set of photographs.

An Unusual Horned Lark Family. By Frank Levy.—Eight eggs all of which hatched.

Migration Group Chart. By S. A. Hausman.—A good diagrammatic representation of residents, summer residents, etc.

The Plumages of North American Birds. By F. M. Chapman, Color plate by L. A. Fuertes.—The Arizona, Florida, California and Santa Cruz Jays.

Dr. A. A. Allen in the School Department and the Editor on the preceding page dwell upon the importance of accuracy in observation. The latter suggests the desirability of writing down an accurate description of all parts of the bird that may be under observation so as to compel the observer to gain a complete idea of what he sees while Dr. Allen urges that teachers do not hesitate to question the accuracy of children's identifications when they would seem to be unlikely. Too much emphasis cannot be placed upon the importance of this matter. The carelessness is not limited to children but to many of those whose observations are being published as part of the records of the National or State governments or of clubs and societies and we are forced to rely upon the rigorous pruning and questioning of an editor to save us from a mass of absolutely worthless records. The plan practiced by certain careful observers of

⁵ Some remarks on the food of the Barn-Owl (*Strix flammea* Linn.), Journ. Wild Bird Investigation Soc., Vol. 1, No. 1, Nov. 1919, pp. 9-10.

⁶ Journ. Ministry Agr., Vol. 26, No. 10, Jan. 1920, pp. 992-5.